

## REMARKS

With entry of the amendment, claims 1-11 are pending. Claims 1-11 are under consideration, and claims 12-21 are canceled. Claims 1-3 and 6-11 are rejected, claim 4 is objected to as depending from a rejected base claim, and claim 5 is allowed.

Applicants have amended claims 1 and 6 in order to place the claims in better form for consideration on appeal. The amendments are fully supported by the specification, introduce no new matter, and do not necessitate an additional search.

In view of the amendments above and arguments below, Applicants respectfully request allowance of claims 1-4 and 6-11.

### Rejections under 35 U.S.C. 112, first paragraph

The Office Action maintained the rejection of claims 1-3 and 6-11 under 35 U.S.C. 112, first paragraph as containing subject matter not described in the specification in such a way as to convey possession of the claimed invention.

Applicants previously argued that the specification discloses that polypeptide fragments of SEQ ID NO:2 could function as antigens in developing antibodies. The Office Action indicated that Applicants' arguments were not found persuasive because the claims do not drawn to fragments having the ability to bind and cleave to C1 esterase or immunogenic fragments of SEQ ID NO:2.

In order to advance prosecution on the merits, Applicants have amended the claim 1 to reflect that an isolated polypeptide comprising the recited amino acid sequence comprises a StcE specific immunogen or has the ability to bind to and cleave C1 esterase inhibitor. Similarly, claim 6 was amended to reflect that the isolated polypeptide comprises a StcE specific immunogen. The amendments are believed to overcome rejection of or objections to claims 1 and 6, as well as claims 2-4 and 7-11, which depend from claim 1 or 6.

Accordingly, Applicants request that the rejection under 35 U.S.C. 112, first paragraph be withdrawn.

### Rejections under 35 U.S.C. 102(b)

The Office Action maintained the rejection of claims 1-3 and 6-11 under 35 U.S.C. 102(b) as being anticipated by Makino *et al.* (DNA Research 5:1-9, 1998) or Burland (Nuc.

Acid Res. 26:4196-4204, 1998), and claims 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Brunder (Accession No. Q9ZAL1, May 1, 1999), which were characterized Makino and Burland as disclosing a polypeptide sequence that is 100% identical to SEQ ID NO:2, or comprises the polypeptide or fragments of claims 1-3 and 6-11 (Makino and Burland), or as teaching a polypeptide sequence having 275 amino acid residues that match SEQ ID NO:2 (Brunder).

The Examiner asserts that Applicants argued that the claimed "polypeptide is an isolated StcE polypeptide, discovered by correlating the loss of an observed phenotype, as compared to the hypothetical protein sequences" of the art. The Examiner concluded that the claims are directed to any polypeptide or fragments thereof without any assigned function, and that therefore, no difference was seen between Applicants' polypeptide and that of the prior art.

Although Applicants have amended the claims to recite the function, thereby overcoming the rejection, Applicants wish to clarify their previous arguments. Applicants' position is that, whereas the prior art disclosed the translation product of but one of countless putative coding sequences, the prior art does not teach the claimed isolated polypeptide sequence, nor provide motivation to isolate such a sequence, particularly in view of the fact that the cited art does not disclose whether StcE is even expressed *in vivo*.

Applicants believe that the polypeptides as claimed are patentable over the prior art, but maintain that patentability of the claimed StcE sequence does not turn on its claimed function.

In view of the forgoing, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. 102(b).


#### Objection to claim 4

The Examiner has indicated that claim 4 is allowable, but has objected to claim 4 as depending from rejected base claim 1. Applicants agree that claim 4 is allowable over the prior art. Applicants have amended claim 1 to recite that the amino acid sequence comprises a StcE specific immunogen or has the ability to bind to and cleave C1 esterase inhibitor. This amendment is believed to overcome the rejections of claim 1. Therefore, Applicants request withdrawal of the objection and allowance of claim 4.

As the application is now in condition for allowance, Applicants respectfully request withdrawal of all rejections and allowance of the claims.

This response is accompanied by Check No. ~~51338~~ in the amount of \$55.00 to cover the small entity fee required under 37 C.F.R. 1.17(a )(1). No other fee is believed due in connection with this submission. However, if a fee is owing, please charge such fee to Deposit Account No. 50-0842.

Respectfully submitted,



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